AMENDMENTS TO THE CLAIMS

This listing replaces all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Original) A method comprising disrupting a biological sample in a ball mill loaded with disrupting particles that are not substantially spherical.

2. (Original) The method of claim 1, the particles having a jagged surface.

3. (Original) The method of claim 1, the particles having one or more sharp edges or corners.

4. (Original) The method of claim 1, the particles comprising screw-bits, cone balls, pins, or non-spherical shot.

5. (Currently amended) ~~A~~ The method of claim 1 ~~comprising disrupting a biological sample in a ball mill loaded with substantially~~ where the spherical disrupting particles ~~that~~ have been roughened prior to use.

6. (Original) The method of claim 5, where the particles have been roughened by sanding, forming grooves within a surface of the particles, a ball peening process, an electric discharge processes, or by embedding a material within a surface of the particles.

7. (Currently amended) The ~~A~~ method of claim 1, further comprising increasing a yield of nucleic acids from ~~a~~ the biological sample by disrupting the sample in ~~a~~ the ball mill loaded with disrupting particles that are not substantially spherical instead of substantially-spherical disrupting particles of about the same size and density.

8. (Original) The method of claim 7, where increasing a yield comprises increasing a 28S/18S ratio.

9. (Currently amended) ~~A~~ The method of claim 1, further comprising decreasing the disruption time of ~~a~~ the biological sample by disrupting the sample in ~~a~~ the ball mill loaded with disrupting

particles that are not substantially spherical instead of substantially-spherical disrupting particles of about the same size and density.

10. (Currently amended) ~~A~~ The method of claim 1, where ~~comprising disrupting a biological sample in a~~ the ball mill ~~that~~ includes a vial having an inner surface that is jagged or has been roughened prior to use.

11. (Original) The method of claim 10, where the inner surface has been roughened by sanding, forming grooves within the surface, a ball peening process, an electric discharge processes, or by embedding a material within the surface.

12. (Currently amended) ~~A~~ The method of claim 1, where ~~comprising disrupting a biological sample in a~~ the ball mill ~~that~~ includes a vial with an internal grill configured to contribute to disruption.

13. (Canceled)

14. (Original) An apparatus comprising a ball mill including disrupting particles (a) that are not substantially spherical or (b) that are substantially spherical, which have been roughened prior to use.

15. (Original) The apparatus of claim 14, the particles having a jagged surface.

16. (Original) The apparatus of claim 14, the particles having one or more sharp edges or corners.

17. (Original) The apparatus of claim 14, the particles comprising screw-bits, cone balls, pins, or non-spherical shot.

18. (Currently amended) ~~An~~ The apparatus of claim 14, the ~~comprising a~~ ball mill including a vial having an inner surface that has been roughened prior to use.

19. (Original) The apparatus of claim 18, where the inner surface is jagged.

20. (Currently amended) ~~An~~ The apparatus of claim 14, the ~~comprising a~~ ball mill including a vial with an internal grill configured to contribute to disruption.

21. (Canceled)

22. (Original) A kit comprising:

(1) disrupting particles (a) that are not substantially spherical or (b) that are substantially spherical, which have been roughened prior to use; and

(2) a lysis buffer for biological samples.

23. (Original) The kit of claim 22, further comprising a vial.

24. (Original) The kit of claim 23, the vial having an inner surface that has been roughened prior to use.

25. (Original) The kit of claim 23, the vial including an internal grill configured to contribute to disruption of a sample.

26. (Original) A method comprising disrupting a biological sample in a ball mill using disrupting particles having a largest dimension greater than or about equal to 4 mm, the method not comprising plating of yeast or bacteria.

27. (Original) The method of claim 26, the particles being substantially spherical.

28. (Original) The method of claim 26, the particles comprising steel spheres.

29. (Original) The method of claim 28, the spheres having a diameter of 3/16, or 7/32 inches.

30. (Original) The method of claim 26, the particles comprising diagonals or coneballs.